# DEPARTMENT OF ENVIRONMENTAL QUALITY
Water Protection Bureau

## Environmental Assessment (EA)

**Name of Project**: Pesticide General Permit (PGP) MTG870000

**Type of Project**: This project is the renewal of the PGP, which is a Montana Pollutant Discharge Elimination System (MPDES) General Permit, for another five-year cycle. The PGP is the permitting mechanism developed to provide coverage to any owner/operator who requests permit coverage for their application of pesticides into or over state surface waters, including near (such that the pesticide is unavoidably discharged into the surface water).

**Location of Project**: Statewide (except within the boundaries of Indian Reservations)

**Description of Project**: The renewed PGP will continue to require anyone that applies pesticides to or over state surface waters, including near (such that the pesticide is unavoidable discharged into the surface water), to:

- Submit a Notice of Intent (NOI) to the Department of Environmental Quality (DEQ) in order to be authorized under the PGP;
- Apply pesticides in accordance with the pesticide label;
- Have the pesticide label accessible; and
- Report adverse incidents.

In addition, the PGP will continue to require the subset of larger owner/operators that exceed annual thresholds (provided in Table 1 of the permit) to take the following additional actions:

- Prepare a Pesticide Discharge Management Plan (PDMP) which includes pest identification and development of action levels (pest activity trigger values such as density of mosquito larvae), alternative evaluation, equipment maintenance and calibration;
- Conduct pest surveillance prior to pesticide application to ensure the action threshold has been met;
- Assess environmental conditions after application to ensure no adverse impacts;
- Maintain records; and
- Submit an annual report to DEQ.

**Agency Action and Applicable Regulations**: DEQ is proposing to re-issue the PGP for another five-year renewal cycle, which will be the MPDES permitting mechanism for any owner/operator that applies pesticides into or over state surface waters, including near (such that the pesticide is unavoidably discharged into the surface water). The PGP is designed to provide the permit coverage for eligible activities without requiring further agency review for each. This EA covers the re-issuance of the master PGP and any owner/operators authorized under it.

DEQ summarized the review of applicable MPDES regulations and development of the PGP requirements in the Fact Sheet that corresponds to this proposed permitting action. The following are applicable regulations:

Montana Water Quality Act 75-5-101, *et seq.,* Montana Code Annotated (MCA)

Administrative Rules of Montana (ARM) Title 17, Chapter 30:

Subchapter 2- Fees
Subchapter 6 - Surface Water Quality Standards
Subchapter 7 - Nondegradation of Water Quality
Subchapter 13 - MPDES Permits

**Summary of Issues**: The 2011 Pesticide General Permit was the original MPDES permit developed to authorize pesticide activities that have historically been regulated, to varying degrees, under other federal and state regulations, including the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and Section 75-5-308, MCA Short-Term Exemptions. There were a number of issues raised during the development of the original PGP that appear to have been satisfactorily addressed, including the definition of "near" state surface water, who is the owner/operator, and what is a state surface water.

During this renewal, DEQ became aware of concern for pesticide applications within proximity of each other, such as multiple dock owners conducting similar pesticide applications within the same general area. DEQ determined that compliance with the PGP is sufficient to protect the beneficial use of the waterbodies even in this scenario, based on the following:

- Most of the pesticide activities permitted under the 2011 PGP were for smaller areas (66 smaller operations authorized, out of 72 authorizations). While concern was expressed regarding the cumulative impact of numerous owner/operators applying pesticides to small treatments areas, the volume of discharges from these smaller owner/operators applying to small treatment areas is believed to be cumulatively less than the volume of discharges from applications made by owner/operators applying to large treatment areas. [EPA Pesticide General Permit Fact Sheet, 2016 (EPA FS 2016)].
- Under FIFRA, EPA evaluates risk associated with pesticides and mitigates unreasonable ecological risk. All new pesticides must undergo a registration procedure under FIFRA during which EPA assesses a variety of potential human health and environmental effects associated with use of the product. Under FIFRA, EPA is required to consider the effects of pesticides on the environment by determining, among other things, whether a pesticide ''will perform its intended function without unreasonable adverse effects on the environment,'' and whether ''when used in accordance with widespread and commonly recognized practice [the pesticide] will not generally cause unreasonable adverse effects on the environment.'' Compliance with FIFRA is the fundamental requirement of the PGP.
- In developing the 2011 PGP, DEQ evaluated ambient monitoring data, as well as the frequency of the identification of specific pesticides as the cause of water impairments, to assess whether pesticide residues are currently present in waters at levels that would exceed water quality standards. The monitoring data, although limited in scope, show that, in most samples, most pesticides were below ambient water quality criteria or benchmarks developed by EPA's Office of Pesticide Programs (OPP). [EPA FS 2016]. DEQ has no evidence that implementation of the 2011 PGP has resulted in documented water quality impacts.
- Biological pesticides discharged to waters do not work through a toxic mode of action. For chemical pesticides, the discharges covered under this permit are the residues after the pesticide has performed its intended purpose. Thus, the residue will be no higher than, and in many instances, lower than, the concentration of the pesticide as applied. Each owner/operator is required to control its discharge as necessary to meet applicable water quality standards.
- The PGP excludes pesticide applications that result in discharges of any pesticide to waters impaired for an active ingredient of that pesticide or a degradate of such an active ingredient. For instance, application of pesticides that contain copper is not allowed in waters listed as impaired for copper.

**Benefits and Purpose of Action**: DEQ was required to institute a pesticide permitting program by 2011. This requirement stemmed from a court decision made on January 9, 2009, whereby the Sixth Circuit held that the CWA unambiguously includes "biological pesticides" and "chemical pesticides" with residuals within its definition of "pollutant," and therefore National Pollutant Discharge

Elimination System (NPDES) permits will be required for discharges to state surface waters of biological pesticides, and of chemical pesticides that leave a residue.

From 1993 until the first PGP became effective in 2011, DEQ authorized short-term exemptions from Montana water quality standards for the application of a pesticide… 'when it is used to control nuisance aquatic organisms or to eliminate undesirable and nonnative aquatic species' under the Montana Water Quality Act (MCA) 75-5-308. DEQ could no longer issue 308 authorizations for those activities once the PGP became effective in 2011 [Section 75-5-308(3), MCA]. As a result, many of the pesticide applicators that were previously subject to 308 authorization requirements are instead subject to the PGP.

The PGP articulates planning, control, monitoring, reporting and recordkeeping for application of pesticides to or over water that are above an annual threshold. One benefit is that both decision-makers and pesticide applicators will be more aware of options in pest management and promote better control in the applications.

**Affected Environment & Impacts of the Proposed Project**:

Y = Significant impacts may occur.
N = Not present or No significant impact will likely occur.

| IMPACTS ON THE PHYSICAL ENVIRONMENT | |
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| RESOURCE | [Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES |
| 1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations? | [N] |
| 2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality? | [N] The PGP is applicable to all state surface waters, including Outstanding Resource Waters and A-Closed and A-1 waterbodies. Overall, impact from pesticide applications into or over surface waters is expected to have only short-term impacts. Review by DEQ determined that discharges from pesticide activities authorized under the PGP would be considered nonsignificant and, therefore, would not be subject to review under Montana's nondegradation statute, § 75-5-303, MCA.<br>The PGP is designed to ensure that the discharge of pesticides (either the residual pesticide or breakdown products) will not cause or contribute to exceedances of ambient water quality standards:<br>• The PGP requires owner/operators to use the pesticide in accordance with the FIFRA label. When EPA determines that a pesticide product can be registered for use, the Agency has concluded that the use of the pesticide product will not cause unreasonable adverse effect when applied according to the label directions and restrictions.<br>• The PGP does not allow use of pesticides in any waterbody listed as impaired for the pesticide or its breakdown products – including Hauser Lake, listed impaired for endosulfan sulfate in 1996, and over 200 waterbody segments listed as impaired for copper.<br>The Montana Department of Agriculture (MDA) and DEQ, jointly, are required to conduct monitoring to determine ground water quality, assess the presence of agricultural chemicals in ground water, determine the vulnerability and sensitivity of Montana aquifers, and evaluate the effectiveness of management plans implemented for the protection of ground water resources (§ 80-15-104, MCA). Whenever MDA monitoring results detect a new pesticide compound in state water, MDA requests DEQ develop Water Quality Standards (WQS) for the protection of human health. Montana currently has WQS for approximately 170 pesticide active ingredients or breakdown products, as contained in Circular DEQ-7. The PGP has no foreseen effect on the ground water concentration of any of these pesticides. |

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| 3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)? | [N] An unintended consequence of pesticide application is spray drift – the airborne movement of pesticide sprays away from the target application site. Spray drift of pesticides during application is not an activity covered under the federal or Montana's PGP as it is considered a non-point source of pollution.<br>Pesticide drift can pose health risks when sprays and dusts are carried by wind. EPA is actively engaged in several initiatives to help minimize pesticide drift problems, see http://www2.epa.gov/reducing-pesticide-drift |
| 4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present? | [N] Pesticide application covered under the PGP includes herbicides to control nuisance weeds and algae in aquatic systems, including invasive species. Nuisance weeds and algae can decrease populations of native aquatic species including threatened and endangered species as well as reduce aquatic biodiversity by preventing desirable species growth and unbalancing desirable aquatic species populations and development.<br>The PGP requires owner/operators to apply pesticides in accordance with the FIFRA label and to have the pesticide label available. The pesticide must be labeled for use in controlling the target pest. It also requires any observed adverse incidents to be reported to DEQ. Larger pesticide applicators have additional requirements including maintaining and calibrating their pesticide application equipment and the development of a Pesticide Discharge Management Plan (PDMP) to provide a pest management strategy. |
| 5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish? | [N] Pesticide application covered under the PGP would include piscicides, lampricides, larvacides, and any other pesticide application to or over state surface waters. As above, the PGP requires owners/operators to apply pesticides in accordance with the FIFRA label and to have the label available. The pesticide must be labeled for use in controlling the target pest. It also requires any observed adverse incidents to be reported to DEQ. Additional requirements apply to larger pesticide applicators. |
| 6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED. ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern? | [N] The Montana Natural Heritage Program maintains a database at http://mtnhp.org/speciesofconcern/ with information on species of concern (SOC) in the state. Review of the SOC list for plants in Montana that may be impacted by pesticide applications covered under this PGP indicated that there were nine (9) aquatic plants and 60 wetland/riparian plants on the list. One of the nine aquatic plants on the SOC list identified the use of aquatic pesticide as a potential threat, along with boating activity, lake shore development, and aquatic weeds. Several of the species listed threats such as development, recreational activities, siltation, and nutrients.<br>Review of the SOC list for animals in Montana that may be impacted by pesticide applications covered under this PGP (aquatic or wetlands) indicated that there could be a variety of animals that might be impacted directly (effected by pesticide) or indirectly (effected by food chain):<br>• Mammals – ~ 5 species such as Northern Bog Lemming, Northern Short-tailed Shrew, Artic Shrew, and Little Brown Myotis and Hoary Bats.<br>• Birds – ~ 25 species such as (not limited to): Clark's Grebe, Lee Conte's and Nelson's Sparrows, American Bittern, American White pelican, several terns (Caspian, Common and Least), Trumpeter Swan, and Piping Plover<br>• Reptiles – 3 species: spiny soft-shell turtle, snapping turtle, and Smooth Greensnake.<br>• Amphibians – 6 species<br>• Fish – 23 species<br>• Insects - ~ 30 species<br>• Mollusks - ~ 6 species<br>• Freshwater sponge – 1 species<br>The few SOC with descriptions of threats listed human development impacts such as damming and coal bed methane; none listed pesticide use. Furthermore, EPA is responsible for addressing secondary impacts as part of their FIFRA review, and conformance with the PGP requires following the pesticide use label requirements. See also #4, #5 & #7. |

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| 7. SAGE GROUSE EXECUTIVE ORDER: Is the project proposed in core, general or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program (Program) at https://sagegrouse.mt.gov/?<br>If yes, did the applicant attach documentation from the Program showing compliance with Executive Order 12-2015 and the Program's recommendations? If so, attach the documentation to the EA and address the Program's recommendations in the permit. If project is in core, general or connectivity habitat and the applicant did not document consultation with the Program, refer the applicant to the Sage Grouse Habitat Conservation Program. | [N] The application of pesticides is identified as an exempt activity under Attachment F of Executive Order 12-2015:<br>*i. Herbicide and pesticide use except for in the control of sagebrush and associated native forbs.*<br>Since the PGP does not authorize pesticide use on sagebrush or associated native forbs, such activity would not be covered under this permit. The PGP is designed to provide MPDES permit coverage for owner/operators who apply pesticides into or over state surface water, including near (such that the pesticide is unavoidably discharged into the surface water).<br><br>Therefore, no documentation from the Sage Grouse Habitat Conservation Program is needed for this renewal or any potential authorizations under the renewed PGP. |
| 8. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present? | [N] No impact would be expected to any historical or archaeological sites from pesticide application into or over state surface waters. |
| 9. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light? | [N] The PGP may allow the improvement of aesthetics by permitting the legal use of herbicides to control aquatic noxious weeds and algae. |
| 10. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed? | [N] |
| 11. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project? | [N] DEQ considered whether multiple pesticide applications in a proximate location could affect another project, and concluded that the beneficial use of the waterbody would be protected through conformance with the PGP. (See Issues section, above). |

| **IMPACTS ON THE HUMAN ENVIRONMENT** | |
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| 12. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area? | [N] Although there are health & safety risks associated with handling pesticides, FIFRA labeling and pesticide safety training requirements are designed to reduce those risks. Furthermore, the application of pesticides for mosquito and other vector control is crucial for protecting public health. Therefore, the PGP should not add to human health and safety risks. |
| 13. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities? | [N] |
| 14. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number. | [N] |
| 15. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue? | [N] |

| IMPACTS ON THE HUMAN ENVIRONMENT | |
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| 16. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed? | [N] |
| 17. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect? | [N] The PGP does not have an impact on any relevant environmental plans and goals because it would not prohibit the use of pesticides. Instead, it requires owner/operators to follow the FIFRA label and some larger owner/operators to evaluate their pest management needs and options and implement sound pest management practices. |
| 18. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract? | [N] The PGP may allow the improvement of access to recreation by permitting the legal use of herbicides to control aquatic weeds and algae and pesticides to control vectors such as mosquitos. No adverse impacts are foreseen. |
| 19. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing? | [N] |
| 20. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible? | [N] |
| 21. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area? | [N] |
| 22. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES: | [N] Pesticide application is one of a number of pest management methods. There are many important human health, economic, and environmental benefits to consider in pest management, including some of the obvious:<br>• Mosquito control – in addition to being a nuisance, they are a disease vector for West Nile virus.<br>• Algae control – algae blooms can wreak havoc on aquatic environments.<br>• Invasive species control – zebra mussels can close off irrigation pipelines and other water conveyance structures.<br>• Native species restoration – piscicide application to repopulate specific water bodies with native Bull Trout. |
| 23(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required. | [N] |
| 23(b). PRIVATE PROPERTY IMPACTS: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? | [NA] |
| 23(c). PRIVATE PROPERTY IMPACTS: If the answer to 23(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? | [NA] |

24. **Description of and Impacts of other Alternatives Considered**: MPDES permitting for discharges to state surface waters of biological pesticides and of chemical pesticides that leave a residue is required based on the Sixth Circuit Court decision in 2009. Other than re-issuing this general permit for another five year cycle, DEQ considered:

    **No Action**: Under the "No Action" alternative, DEQ would not issue this general permit, and owner/operators would be required to obtain individual MPDES permit coverage. This would be expensive, time-consuming, and provide no foreseeable environmental benefits. This alternative may result in owner/operators discharging without permit coverage and may result in a net negative impact to water quality as the general permit is designed to prevent pollution and degradation of state waters.

25. **Summary of Magnitude and Significance of Potential Impact**: DEQ expects approximately one hundred pesticide applicators and/or decision-makers will be subject to the renewed PGP. There were 72 permitted facilities for the 2011 PGP. This is out of the universe of approximately 50 mosquito districts, 50 weed control districts, 50 irrigation districts, 10 Bureau of Land Management (BLM) and 10 US Forest Service field offices, and 90 pesticide applicators.

26. **Cumulative Effects:** Cumulative effects are collective impacts on the human environment when considered in conjunction with other past, present and future actions related to the proposed action by location and generic type. The analysis includes review of state and non-state activities that have occurred, are occurring, or are future (but undergoing concurrent evaluation).

    DEQ considered the fact that the PGP permit authorizes the legal use of pesticides into or over state surface waters state-wide. After consideration, DEQ could not identify any other past, present, or future actions that would cause cumulative effects other than the use and discharge of pesticides and fertilizers from agricultural, residential, and other non-regulated sites, or other land-development activities such as subdivisions. There are no other known pesticide use or discharge permits. DEQ may modify the PGP if new information is received in the future indicating that cumulative effects on the environment are unacceptable [see ARM 17.30.1341(2)(b)].

27. **Preferred Action Alternative and Rationale:** The preferred action is to re-issue the PGP for another five-year permit cycle, which will continue to provide a regulatory mechanism for protecting water quality during pesticide applications.

    **Recommendation for Further Environmental Analysis:**

    [ ] EIS [ ] More Detailed EA [x] No Further Analysis

    **Rationale for Recommendation:** There would be no significant adverse impacts on the physical, biological or social portion of the human and natural environment for the reasons detailed above.

28. **Public Involvement:** There will be a public hearing in addition to the public comment period for this General Permit.

29. **Persons and agencies consulted in the preparation of this analysis:**
    - Leonard Berry, Pesticide Compliance Program Manager, Montana Department of Agriculture;
    - Don Skaar, Fisheries Management Section Supervisor, Montana Fish, Wildlife, and Parks; and
    - Stephanie Hester, Montana Invasive Species Council Liaison, Montana Department of Natural Resources, Conservation & Resource Development

**EA Prepared By:** Christine Weaver, June 2016

**Approved By:**

Jon Kenning, Chief
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September 15, 2016
Date